

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

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| _____ |) | |
| VIDERAY TECHNOLOGIES, INC. |) | |
| and TEK84, INC., |) | |
| |) | |
| Plaintiffs, |) | |
| |) | |
| v. |) | Civil Action |
| |) | No. 23-cv-13035-PBS |
| VIKEN DETECTION CORP., |) | |
| |) | |
| Defendant. |) | |
| _____ |) | |

MEMORANDUM AND ORDER

November 19, 2025

Saris, J.

INTRODUCTION

This case involves a patent for an x-ray imaging device. Videray Technologies, Inc. and Tek84, Inc. ("Plaintiffs") brought this action against Viken Detection Corp. ("Viken") seeking a declaratory judgment of non-infringement, invalidity, and unenforceability with respect to three patents held by Viken: U.S. Patent No. 10,770,195 ("the '195 patent"), U.S. Patent No. 11,200,998 ("the '998 Patent"), and U.S. Patent No. 11,776,706 ("the '706 Patent"). Following a Markman hearing, the Court now enters this order construing terms in the three patents.

BACKGROUND

The '998 Patent and '706 Patent are continuations of the '195 patent, so all three patents contain identical specifications. For ease of reference, the Court refers to the '195 patent when citing that specification.

X-ray backscatter imaging -- in which reflected or scattered x-rays create the desired image -- is frequently employed by handheld scanning devices to detect concealed contraband such as drugs and weapons. To protect users of the devices from x-ray radiation, the devices historically have been fully encased by a shield built from x-ray absorbing materials such as tungsten. Those materials are typically heavy and unwieldy.

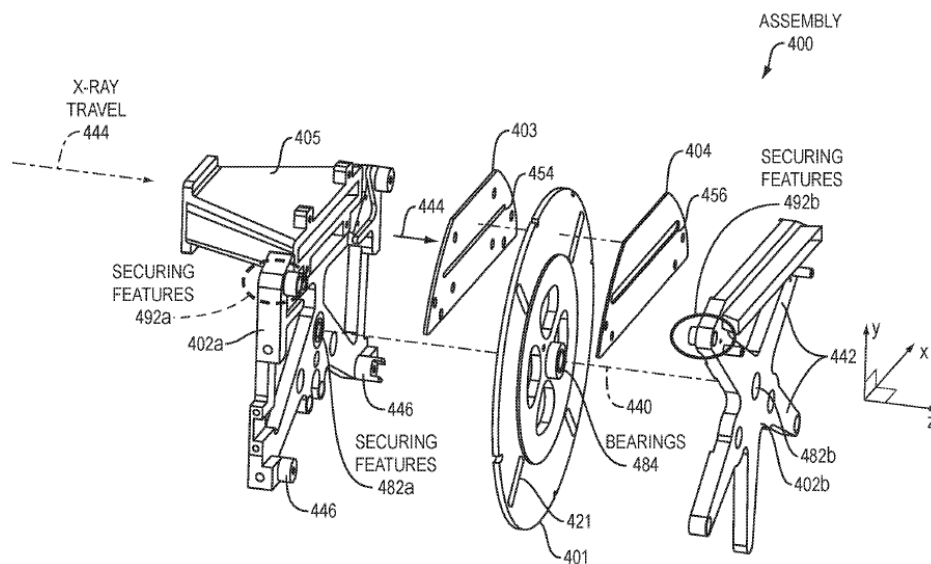
The asserted patents aim to alleviate that problem by claiming a "chopper wheel assembly" that allows for a more lightweight backscatter imaging device.¹ In this assembly, x-rays are channeled

¹ The first independent claim of the patent claims the following:

1. An x-ray chopper wheel assembly comprising:
 - a disk chopper wheel configured to rotate about a rotation axis thereof, the rotation axis perpendicular to a rotation plane of the disk chopper wheel, the disk chopper wheel having a solid cross-sectional area in the rotation plane, the disk chopper wheel configured to absorb x-ray radiation received from an x-ray source at a source side of the disk chopper wheel, the disk chopper wheel defining one or more radial slit openings configured to pass x-ray radiation from the source side of the disk chopper wheel to an output side of the disk chopper wheel;
 - a source-side scatter plate having a solid cross-sectional area in a plane substantially parallel to the rotation plane of the disk chopper wheel, the source-side scatter

through slits in a rotating "chopper wheel" to ultimately reach the object being scanned. At least one "scatter plate," rather than a shield encasing the entire assembly, is used to absorb the x-rays that rebound from the solid portions of the chopper wheel.

One embodiment of the asserted patents is shown in the following figure, which depicts an exploded view of an "x-ray chopper wheel assembly 400":



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- plate configured to absorb x-ray radiation and defining an open slot therein configured to pass x-ray radiation, wherein the solid cross-sectional area of the source-side scatter plate is substantially smaller than the solid cross-sectional area of the disk chopper wheel; and
- a support structure configured to secure the source-side scatter plate in the plane substantially parallel to the rotation plane of the disk chopper wheel with a source-side gap between the source-side scatter plate and the source side of the disk chopper wheel wherein the disk chopper wheel and source-side scatter plate are arranged relative to each other to cause a substantial confinement of x-rays that are scattered from the disk chopper wheel.

'195 patent at 14:46-15:7 (emphases added). The underlined terms are the ones whose constructions are in dispute.

'195 patent at 8:6, fig.4B; see id. at 9:59-60. In this embodiment, x-rays travel through an "optional shield structure 405" and then through a horizontal slit in a "source-side scatter plate 403." Id. at 9:48-49, 9:51-52. The x-rays subsequently pass through radial slits in a rotating "disk chopper wheel 401" and then through another horizontal slit in an "output-side scatter plate 404." Id. at 10:2, 10:8-9. The scatter plates and disk chopper wheel are secured by "support structure portions 402a and 402b." Id. at 10:1 (emphases omitted); see id. at 9:65-10:6.

LEGAL STANDARD

Claim construction is an issue of law. See Teva Pharms. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 325 (2015). "Claim terms are generally given their plain and ordinary meaning, which is the meaning one of ordinary skill in the art would ascribe to a term when read in the context of the claim, specification, and prosecution history." Chewy, Inc. v. Int'l Bus. Machs. Corp., 94 F.4th 1354, 1359 (Fed. Cir. 2024).

Courts begin claim construction "by considering the language of the claims themselves." Grace Instrument Indus., LLC v. Chandler Instruments Co., 57 F.4th 1001, 1008 (Fed. Cir. 2023). The "claims must be read in view of the specification, of which they are a part." Id. (quoting Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc)). A patent's "specification is the 'single best guide to the meaning of a disputed term' and

'is, thus, the primary basis for construing the claims.'" Id. (citation omitted) (first quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996); and then quoting Phillips, 415 F.3d at 1315). But "particular features recited in the specification merely as aspects of embodiments, and not expressly or even implicitly identifying requirements of the invention, do not narrow a claim term that is otherwise broader in its ordinary meaning." Promptu Sys. Corp. v. Comcast Corp., 92 F.4th 1372, 1379 (Fed. Cir. 2024).

A court may also "consider extrinsic evidence, like expert testimony, dictionaries, and treatises," during claim construction. Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1290 (Fed. Cir. 2015). This evidence, however, is "less significant than the intrinsic record" and cannot overcome a meaning that is clear from the claims and the specification. ParkerVision, Inc. v. Qualcomm Inc., 116 F.4th 1345, 1357 (Fed. Cir. 2024) (quoting Phillips, 415 F.3d at 1317).

DISCUSSION

A scan of the parties' arguments makes clear that two items can be addressed at the outset. First, the parties have agreed to the following construction, which the Court adopts:

| Term | Agreed-Upon Construction |
|-----------------|--------------------------|
| "approximately" | "plus or minus 0.25 mm" |

Dkt. 50 at 4. Second, the parties initially disputed the constructions of the following two terms, with Plaintiffs contending that the two terms are indefinite:

| Term | Plaintiffs' Construction | Viken's Construction |
|--|--------------------------|--|
| "substantially smaller than the solid [cross-sectional] area of the [disk/disk chopper wheel/chopper wheel]" | Indefinite | "either the source-side plate width or the source-side plate length of the source-side scatter plate is smaller than the diameter of the disk chopper wheel" |
| "substantially parallel to [the/a] rotation plane of the disk chopper wheel" | Indefinite | Plain and ordinary meaning |

Id. At the Markman hearing, however, the parties indicated that they placed this disagreement on the chopping block and that no current dispute remains over the meaning of these terms, subject to the Plaintiffs' reserving the right to reassert their argument regarding indefiniteness at a later stage of the litigation. Plaintiffs have acceded to Viken's constructions of these two terms in the meantime. See Dkt. 52 at 20. Therefore, the Court adopts Viken's constructions and, as discussed below, will adjudicate any indefiniteness arguments at summary judgment. See infra Section I.

The proper constructions of several other claim terms are contested. The Court addresses each set of disputed constructions in turn.

I. "Substantial Confinement"

The parties' first disagreement concerns variations of a phrase used to describe the extent to which the arrangement of components in the patented invention results in the reduction of x-ray radiation: "substantial confinement."

| Term | Plaintiffs' Construction | Viken's Construction |
|---|---------------------------------|---|
| "substantial confinement" / "confine substantially" / "substantially confining" | Indefinite | "x-ray leakage of scattered radiation that is limited to no more than 50% leakage of the radiation that is scattered by the wheel, or to an x-ray radiation dose of no more than 5 milli-Rem per hour at a distance of 5 cm away from an outer surface of the assembly, whichever is greater" |
| "limit(s) leakage of scattered radiation to no more than [50%/10%] of scattered radiation or to a dose of no more than [5/0.5] milli-Rem per hour at a distance of 5 cm away from an outer surface of the | Indefinite | Plain and ordinary meaning |

| | | |
|---------------------------------|--|--|
| assembly, whichever is greater" | | |
|---------------------------------|--|--|

There is no dispute that the specification explicitly defines "substantial confinement" as follows:

As used herein, "substantial confinement" of x-ray radiation denotes that the disk chopper wheel and source-side scatter plate are arranged relative to each other with gaps, plate width, etc. such that x-ray leakage of scattered radiation is limited to no more than 50% leakage of the radiation that is scattered by the wheel, or to an x-ray radiation dose of no more than 5 milli-Rem per hour at a distance of 5 cm away from an outer surface of the assembly, whichever is greater.

'195 patent at 11:36-44; see also id. at 11:44-50 ("The substantial confinement may further include limiting leakage of scattered radiation to no more than 10% of radiation that is scattered by the assembly, or to a radiation dose of no more than 0.5 milli-Rem per hour at a distance of 5 cm away from the outer surface of the assembly, such as from the outer surface of the support structure, whichever is greater.").

"Where the specification instructs as to the meaning of a claim term, 'the inventor's lexicography governs.'" Grace Instrument, 57 F.4th at 1010 (quoting Phillips, 415 F.3d at 1316). Plaintiffs contend, however, that here, the inventor's lexicography is itself indefinite, rendering the term "substantial confinement" indefinite as well. In particular, Plaintiffs argue that the specification's definition of "substantial confinement" "requires comparing two measurements of inconsistent units" -- individual x-rays measured as a unitless integer, on the one hand,

with radiation dose measured in millirem per hour,² on the other -- "to determine 'whichever is greater,'" which constitutes "a mathematical impossibility." Dkt. 52 at 11. Plaintiffs further assert that the definition of "substantial confinement" is indefinite because it fails to elucidate precisely "how or at what location to perform the measurement[] required" at a distance of 5 cm from the outer surface of the assembly. Id. Plaintiffs submit an expert declaration from the CEO of Plaintiff Tek84, Inc., in support of their positions.

Viken responds that the "substantial confinement" limitation is "met by either of two criteria": first, that "x-ray leakage scattered by the wheel . . . is decreased by 50% or more," or second, that "x-ray leakage scattered by the chopper wheel . . . is reduced to no more than 5 milli-Rem per hour at a distance of 5 cm away from the chopper wheel assembly." Dkt. 55 at 11. Viken further posits that "both criteria are measuring the same variable of radiation dose, which is measured in milli-Rem," Dkt. 76 at 4, and that calculating radiation dose based on a number of x-rays would be straightforward to a person of ordinary skill in the art. With respect to the location of measurement, Viken asserts that the "dosage of the second criterion refers to the maximum dosage

² A millirem is one thousandth of a rem, which stands for "roentgen equivalent man" and reflects biological damage caused by radiation dose.

at any point 5 cm away from the assembly,” as is relevant for assessing the safety of an individual holding the scanning device. Dkt. 76 at 6 (emphasis added). In support of its positions, Viken submits an expert declaration from the inventor of the patented device.

A patent’s claims must “particularly point[] out and distinctly claim[] the subject matter which the inventor . . . regards as the invention.” 35 U.S.C. § 112(b). To satisfy this “definiteness requirement,” the claims must, when “viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 910 (2014). “The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable.” Id.; see Niazi Licensing Corp. v. St. Jude Med. S.C., Inc., 30 F.4th 1339, 1346 (Fed. Cir. 2022) (“[L]anguage has ‘inherent limitations.’ The reasonable certainty standard exists to strike a ‘delicate balance,’ ‘afford[ing] clear notice of what is claimed’ while recognizing such inherent limitations.” (second alteration in original) (citation omitted) (quoting Nautilus, 572 U.S. at 909)). Although “training questions of indefiniteness on individual claim terms” can be a “helpful tool” in construing overall claims, “the dispositive question in an indefiniteness inquiry is whether the ‘claims,’ not particular claim terms,” are

insufficiently definite. Cox Commc'ns, Inc. v. Sprint Commc'n Co., 838 F.3d 1224, 1231-32 (Fed. Cir. 2016).

While “[g]eneral principles of claim construction apply to indefiniteness allegations,” HZNP Meds. LLC v. Actavis Lab'ys UT, Inc., 940 F.3d 680, 688 (Fed. Cir. 2019), at least two rules, as a practical matter, differentiate the indefiniteness inquiry from the mine-run claim construction analysis. First, “[i]ndefiniteness must be proven by clear and convincing evidence.” Sonix Tech. Co. v. Publ'ns Int'l, Ltd., 844 F.3d 1370, 1377 (Fed. Cir. 2017); see Momenta Pharms., Inc. v. Amphastar Pharms., Inc., 887 F. Supp. 2d 303, 313 (D. Mass. 2012) (“[A]n allegedly infringing party must prove indefiniteness by ‘clear and convincing proof’ to overcome the statutory presumption of validity”). Second, “[u]nlike a Markman proceeding that gives meaning to patent claims, indefiniteness invalidates the claims entirely.” Amax, Inc. v. ACCO Brands Corp., 282 F. Supp. 3d 432, 442 (D. Mass. 2017) (quoting CSB-Sys. Int'l Inc. v. SAP Am., Inc., No. 10-2156, 2011 WL 3240838, at *18 (E.D. Pa. July 28, 2011)); see also id. at 441 (“The Federal Circuit has emphasized that it ‘ha[s] certainly not endorsed a regime in which validity analysis is a regular component of claim construction.’” (alteration in original) (quoting Phillips, 415 F.3d at 1327))).

These principles have led courts to defer the question of indefiniteness until the summary judgment stage. See, e.g., id. at

441-42; Koninklijke Philips Elecs. N.V. v. Zoll Med. Corp., 914 F. Supp. 2d 89, 100-01 (D. Mass. 2012), aff'd sub nom., Koninklijke Philips N.V. v. Zoll Med. Corp., 656 F. App'x 504 (Fed. Cir. 2016); Momenta Pharms., 887 F. Supp. 2d at 313. "Given the burden . . . to establish indefiniteness by clear and convincing evidence, as well as the potentially dispositive and patent-invalidating effect of an indefiniteness finding," it often "is appropriate to defer resolution of this question until the close of all discovery, when a fuller record is available." Ethicon Endo-Surgery, Inc. v. Covidien LP, No. 16-cv-12556, 2018 WL 3104078, at *7 (D. Mass. June 21, 2018).

Here, too, the Court agrees with Viken that the indefiniteness concerns raised by Plaintiffs should be deferred. Indeed, the fact that the parties have submitted competing expert declarations accentuates that adjudicating indefiniteness requires a full record. See Koninklijke, 914 F. Supp. 2d at 101 (determining a "battle of the experts" regarding indefiniteness should be deferred until summary judgment). Accordingly, the Court defers the question of indefiniteness until summary judgment.³ In the meantime, the Court construes the term "substantial confinement" in accordance with the patent's lexicography.

³ Because the Court defers the indefiniteness inquiry, Plaintiffs' motion to strike Viken's expert declaration (Dkt. 79) is denied as moot.

II. "Plate"

Next, the parties dispute the proper construction of the term "plate" as used in the patents' references to the source-side and output-side scatter plates:

| Term | Plaintiffs' Construction | Viken's Construction |
|---|---|--|
| "source-side scatter plate" / "output-side scatter plate" | "relatively thin, flat sheet of x-ray absorbing metal at the [source/output] side of the chopper wheel" | "a plate designed to absorb x-rays that are scattered off the chopper wheel" |

Dkt. 50 at 2-3.

In their briefing and at the Markman hearing, the parties made clear that no real dispute exists as to the terms "source-side" and "output-side," which specify the locations of the scatter plates with respect to the chopper wheel. Nor do the parties disagree that the scatter plates are intended to absorb x-rays rebounding from the chopper wheel. Rather, the dispute centers on the term "plate." Plaintiffs contend that the word "plate" must refer to a "relatively thin, flat sheet," while Viken argues that the term "plate" is already comprehensible to a jury and thus need not be construed.

Dictionaries are "among the many tools that can assist the court in determining" the plain and ordinary meaning of a claim term. Phillips, 415 F.3d at 1318. Merriam-Webster defines "plate" as "a smooth flat thin piece of material." Plate, Merriam-Webster,

<https://www.merriam-webster.com/dictionary/plate>. Plaintiffs also note, and Viken does not contest, that a specialized engineering dictionary -- the ASTM Dictionary of Engineering Science & Technology -- defines "plate" as "a flat, rolled sheet having a width and length much greater than thickness." Dkt. 53-12 at 4. These dictionary definitions are consistent with the Court's view that in ordinary usage, the word "plate" connotes a generally flat, thin object. See Phillips, 415 F.3d at 1312 ("[T]he words of a claim 'are generally given their ordinary and customary meaning.'" (quoting Vitronics Corp., 90 F.3d at 1582)).

Several lines of intrinsic evidence further support this interpretation. For one, all of the specification's drawings depict the scatter plates as flat and thin. See '195 patent figs.4A, 4B, 5A, 5B; see also id. at 6:35-36 ("Thickness of the scatter plate is further illustrated in connection with FIG. 5B"). Moreover, the specification regularly discusses the importance of the scatter plates' being lightweight, a goal which is better accomplished by thin plates than thick ones. See, e.g., '195 patent at 6:24-29 ("The substantially smaller source-side scatter plate . . . provides for substantially reduced weight of a chopper wheel assembly, facilitating handheld x-ray scanning"). Dependent claims also contemplate relatively thin plates by teaching source-side scatter plates "ha[ving] a

thickness on the order of 1.0 mm.” ’195 patent at 15:17-19, 16:57-59; see also id. at 2:2-3.

The Court construes “plate” as “a generally thin, flat structure.” This construction is consistent with those of other courts in similar contexts. See, e.g., Flexhead Indus., Inc. v. Easyflex, Inc., No. 06-cv-11898, 2008 WL 4813797, at *8 (D. Mass. Nov. 3, 2008) (construing “plate” as “a generally flat, thin structure”); Pelican Int’l Inc. v. Hobie Cat Co., No. 20-cv-2390, 2022 WL 298959, at *5 (S.D. Cal. Feb. 1, 2022) (construing “plate” as a “generally flat structure”).

III. “Support Structure”

The parties’ third dispute centers on the term “support structure”:

| Term | Plaintiffs’ Construction | Viken’s Construction |
|---------------------|--|--|
| “support structure” | “structure that secures claimed components of the chopper wheel assembly relative to each other, and does not comprise the components” | Plain and ordinary meaning, or “a structure that secures the source-side scatter plate in a plane substantially parallel to the rotation plane of the disk chopper wheel” |

Dkt. 50 at 3. The crux of the disagreement is whether the claims at issue teach a “support structure” that is distinct from the

components that it supports. The Court agrees with Plaintiffs that they do.

Claim 1 of the '195 patent is the sole independent claim that includes the term "support structure." That claim teaches an "x-ray chopper wheel assembly comprising" three items: a "disk chopper wheel," a "source-side scatter plate," and a "support structure." '195 patent at 14:46-47, 14:58, 14:66. The Federal Circuit has held that when "a claim lists elements separately," the meaning of the claim language "is that those elements are distinct components of the patented invention." Regeneron Pharms., Inc. v. Mylan Pharms. Inc., 130 F.4th 1372, 1379 (Fed. Cir. 2025) (quoting Becton, Dickinson & Co. v. Tyco Healthcare Grp., 616 F.3d 1249, 1254 (Fed. Cir. 2010)). Further, claim 1 states that the "support structure" is "configured to secure the source-side scatter plate in the plane substantially parallel to the rotation plane of the disk chopper wheel." '195 patent at 14:66-15:1. In other words, the source-side scatter plate is the object that the support structure secures (i.e., the direct object corresponding to the word "secure"). Cf. Flexhead, 2008 WL 4813797, at *6-7 (construing a "sleeve" to be a structure distinct from a "plate" where the patent claimed a "sleeve . . . extending through a broad surface of the plate").

The dependent claims including the term "support structure" follow the same pattern. Some claims identify other items that the

support structure can secure, such as the output-side scatter plate or the disk chopper wheel. See '195 patent at 15:44-51. Other claims teach a "support structure [that] includes a source-side portion and an output-side portion, the source-side and output-side portions configured to be connected together and to secure the disk chopper wheel therebetween." Id. at 15:58-62; see id. at 18:5-8. No claim admits of an interpretation in which the support structure "can be the same structure" as the components it secures. Becton, 616 F.3d at 1254.

Other language in the specification further supports this understanding. For example, the patent's abstract states that in addition to the disk chopper wheel and source-side scatter plate, the x-ray chopper wheel assembly "also includes a support structure." '195 patent, at [57] (emphasis added); cf. Obduskey v. McCarthy & Holthus LLP, 586 U.S. 466, 475 (2019) (noting that when a "primary definition" is followed by the phrase "also includes," such phrasing "strongly suggests" that the items following the words "also includes" do not fall within the "primary definition"); see also '195 patent at 1:55-56 ("The assembly further includes a support structure" (emphasis added)). Moreover, the patents' figures depict the support structure as a separate object from the other components of the x-ray assembly. See '195 patent figs.4A, 4B. And unlike the disk chopper wheel and the scatter plates, which are "configured to absorb x-ray radiation," id. at

14:51-52, 14:61, "the support structure need not be relied upon for x-ray shielding," id. at 9:47; see also id. at 7:12-16 ("[T]he support structure need not be relied upon for x-ray shielding or scattering confinement. Instead, the source-side scatter plate (and in other embodiments, the output-side scatter plate) perform this function.").

Accordingly, the Court construes the term "support structure" as "a structure that secures claimed components of the chopper wheel assembly relative to each other, and that does not comprise the components."⁴

IV. "Disk Chopper Wheel"

Finally, the parties seek construction of various claim terms related to the term "chopper wheel":

| Term | Plaintiffs' Construction | Viken's Construction |
|---|--|---|
| "disk chopper wheel configured to absorb x-ray radiation" | Indefinite; alternatively: "disk-shaped chopper wheel, the entire disk shape configured to absorb x-ray radiation" | See construction of "disk chopper wheel" below, otherwise, plain and ordinary meaning |
| "chopper wheel having a solid area" | Indefinite; alternatively: | See construction of "disk chopper wheel" below, otherwise, |

⁴ Viken states that the term "claimed components" would "confuse a jury." Dkt. 55 at 15. The Court disagrees. The term "claimed components" refers to the components secured by the support structure in each relevant claim -- i.e., the items identified in the claims as the direct objects of the word "secure."

| | | |
|---|--|---|
| configured to block x-ray radiation" | "chopper wheel having a single solid area, the entire solid area configured to block x-ray radiation" | plain and ordinary meaning |
| "configuring a chopper wheel of an x-ray chopper wheel assembly to have a solid area configured to block x-ray radiation" | Indefinite; alternatively: "configuring a chopper wheel of an x-ray assembly to have a single solid area, the entire solid area configured to block x-ray radiation" | See construction of "disk chopper wheel" below, otherwise, plain and ordinary meaning |
| "disk chopper wheel" or "chopper wheel" | Indefinite; alternatively: "disk-shaped chopper wheel, the entire disk shape configured to absorb or block x-ray radiation" | "a disk configured to rotate about an axis having a solid area configured to block x-ray radiation received at a source side of the chopper wheel from an x-ray source, and one or more openings configured to pass x-ray radiation from the source side of the chopper wheel to an output side of the chopper wheel" |

Dkt. 50 at 3-4.

As the parties agree, the dispute relevant to the four above claim terms centers on whether the entire surface of the chopper wheel is configured to absorb x-ray radiation. Plaintiffs argue that the claims' use of the phrase "solid area" indicates that the whole chopper wheel necessarily consists of an x-ray absorbing

material. Viken responds that no language in the claims or specification support Plaintiffs' proposed limitation and that the embodiments in the specification's figures suggest that only part of the chopper wheel need be x-ray absorbing.

The Court agrees with Viken. The patents' claims generally teach a "disk chopper wheel configured to absorb x-ray radiation received from an x-ray source," '195 patent at 14:51-52; see '998 patent at 14:55-56 (same), or a "chopper wheel having a solid area configured to block x-ray radiation received . . . from an x-ray source," '998 patent at 16:16-18; see '706 patent at 14:54-56 (same). Although Plaintiffs are correct that "the claims recite that the 'disk chopper wheel' -- not a portion of the disk chopper wheel -- is 'configured to absorb x-ray radiation,'" Dkt. 74 at 16, the conclusion does not follow that the entire disk chopper wheel must be x-ray absorbing in order for the disk chopper wheel to be "configured" to block radiation.

The specification reinforces the conclusion that the entire chopper wheel need not necessarily be x-ray absorbing. For example, several figures show embodiments of an x-ray assembly in which the x-rays make contact only with the outer portion of the chopper wheel. See '195 patent figs.5A, 6. These drawings suggest that even if a chopper wheel is not entirely composed of x-ray absorbing material, it nevertheless may be "configured" to block x-ray radiation "received" from the x-ray source. Further, the Court

disagrees with Plaintiffs' argument that because the specification generally identifies components that "can be made lighter or less expensive" but makes no "reference to weight or expense relating to the chopper wheel," the wheel must be entirely constructed from a heavier, more expensive x-ray absorbing material. Dkt. 74 at 16. On the contrary, the specification equally calls out components -- such as the source-side scatter plate and the shield structure -- that can be formed from x-ray absorbing materials such as "lead, tin, iron, or tungsten." '195 patent at 2:15; see id. at 9:52-53. The fact that no constituent materials are specified for the chopper wheel weighs toward finding that no claim limits the chopper wheel to being "entirely" composed of such materials.

The task remains of construing the term "disk chopper wheel." Because the parties do not dispute that "disk" refers to the shape of the wheel and that a "chopper wheel" is a well understood term in the art, the Court construes "disk chopper wheel" according to its ordinary and customary meaning as "a generally disk-shaped chopper wheel."

CONCLUSION

For the foregoing reasons, resolution of Plaintiffs' indefiniteness challenges is **DEFERRED**, and Plaintiffs' motion to strike Viken's expert declaration (Dkt. 79) is **DENIED** as moot. The claim terms are construed as set forth in the foregoing opinion

and in the following table, subject to potential indefiniteness challenges at summary judgment:

| Term | Construction |
|--|--|
| "approximately" | "plus or minus 0.25 mm" |
| "substantial confinement" / "confine substantially" / "substantially confining" | Lexicographer's definition (<u>see supra</u> Section I) |
| "plate" | "a generally thin, flat structure" |
| "support structure" | "a structure that secures claimed components of the chopper wheel assembly relative to each other, and that does not comprise the components" |
| "disk chopper wheel" | "a generally disk-shaped chopper wheel" |
| "substantially smaller than the solid [cross-sectional] area of the [disk/disk chopper wheel/chopper wheel]" | "either the source-side plate width or the source-side plate length of the source-side scatter plate is smaller than the diameter of the disk chopper wheel" |
| "substantially parallel to [the/a] rotation plane of the disk chopper wheel" | Plain and ordinary meaning |

SO ORDERED.

/s/ PATTI B. SARIS
Hon. Patti B. Saris
United States District Judge